DOCUMENT RESUME

ED 119 671 IR 003 134

AUTHOR Callagher, Margaret
TITLE Broadcast Evaluation Report Number Eight: Decision-Making in British Education Systems "Caught in the Net", E221:R15.
INSTITUTION Open Univ., Walton, Bletchley, Bucks (England). Inst. of Educational Technology.
PUB DATE Jul 75
NOTE 40p.; Audio-Visual Media Research Group

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage
DESCRIPTORS *Course Evaluation; Decision Making Skills; Drama; *Educational Radio; External Degree Programs; Higher Education; Programing (Broadcast); Student Attitudes
IDENTIFIERS Great Britain; Open University; *Radio Drama

ABSTRACT

A course in the management and administration of British public education systems offered through the British Open University included radio dramatizations which were accompanied by broadcast notes and a correspondence text. Radio 15, "Caught in the Net," was designed to dramatize a simple decision model involving human interaction. Evaluation of the program using questionnaires, interviews, and group discussions revealed that radio drama can provide an enjoyable and memorable learning experience for many students. Radio provides a low-cost and useful resource for presenting complex material, and the majority of the students in the evaluation approved its educational use. Criticisms of the course included dissatisfaction with the distractions of the entertainment element of the program, difficulty in identifying particular characters and allocating viewpoints to the character voices, unfavorable reactions to the time-consuming nature of this component, and general opposition to the use of drama for educational purposes. (CH)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED119671

Broadcast Evaluation Report No. 8

Decision-making in British Education Systems

"CAUGHT IN THE NET"

E221 : R15

ER003134

Audio-Visual Media Research Group
INSTITUTE OF EDUCATIONAL TECHNOLOGY
Open University

Broadcast Evaluation Report
No. 8

Radio Programme	15:	"Caught in the Net".
Related Unit	15:	"An Introduction to Planning and Decision Models".
Open University Course	E221:	"Decision-Making in British Education Systems".

Evaluator	Margaret Gallagher, Research Officer, Institute of Educational Technology.
Producer	Donald Holms, Senior Radio Producer, BBC.
Academic	Tony Gear, Senior Lecturer, Educational Studies.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Audio-Visual Media Research Group,
Institute of Educational Technology,
Open University.

July 1975

© Open University 1975.

PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY

A. W. Bates
Open University

TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE NATIONAL INSTITUTE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER.

NOTE: As this is the second evaluation report on programmes in the E221 course, the general introduction - outlining aims, criteria and method of the 1974 broadcast evaluation programme - is not included here. Readers wishing to refer to it will find it in earlier reports in the series, e.g. Broadcast Evaluation Reports 2, 3 or 4.

CONTENTS

	Page
The programme in context.	1
Method of evaluation.	3
Results: listening figures.	6
general attitudes to Radio 15.	12
overall reactions and general understanding.	14
relationship of print to programme: success in achieving objectives.	19
principle of radio drama; use of radio in general in the course.	24
Conclusions and recommendations:	
Radio 15 "Caught in the Net".	28
radio drama: general issues.	31

Appendices

A. Broadcast notes.

B. Letters and questionnaire to students and tutors.

C. Transcript of telephone group discussion.

D. Students' answers to open-ended questions.

E. Tutors' answers to open-ended questions.

F. CMA feedback on earlier radio plays.

G. Course tutor feedback (CT4) on all radio plays.

(The Appendices are bound separately, and are available on request from the Audio-Visual Media Research Group.)

E221: Decision-Making in British Education Systems
Radio Programme 15: "Caught in the Net"

The Programme in Context

This course is concerned with the management and administration of British public education systems. The principal aim of the course is to analyse the decision-making processes within these systems and to develop an understanding of the complexity of, and interconnections between, factors affecting policy formulation in education. These factors are shown to include the organizational context of the decision-making process, the personal beliefs and prejudices of the decision-makers and the availability of resources. In addition, the course introduces some recent techniques used as a guide to decision-making and to the effective implementation of decisions in educational administration.

The programme in our study is the last of three radio plays transmitted during the course - programmes 1 and 5 were also in dramatic form. This particular programme, Radio 15, is transmitted when students, if working to the course time-table, will have just started on Unit 15, an "Introduction to Planning and Decision Models". In this unit, two management techniques, decision tree diagramming and network planning, are introduced and their use in education is illustrated. Students are advised that "it is most important to study the correspondence text before listening to the programme".[1] The unit objectives state that on completion of the unit, students should be able:

(1) To discuss the concept of modelling as an aid to decision-making.
(2) To explain the principles of two important diagrammatic techniques - decision trees and network planning - giving examples of applications to educational planning.[2]

Throughout the unit, themes developed earlier in the course are re-examined by applying management techniques to various planning problems. For example, after a description of the principles of decision tree diagramming and its illustration through a number of short examples in an educational context, students are asked to construct a decision tree based on the sequence of decision options and uncertainties involved in the first radio programme (also a play) of the course. The script of Radio 1 is reprinted as an appendix to unit 15.

While the correspondence text presents formal approaches to planning and decision-making using networks and decision trees, the radio programme stresses the human factors which are often involved. This is pointed out to students in the broadcast notes (Appendix A) which accompany the programme. The notes are intended to be studied before listening to the programme, and give details of its content and objectives as well as outlining the way in which students should prepare for, and follow up the programme. Two diagrams are included in the notes, relating to the programme content. A study of these is said to be "essential if the programme is to achieve its objectives"[3] and students are advised to

---

1. E221: "Decision-Making in British Education Systems" - Unit 15, p. 3.
2. E221: Unit 15, p. 6.
3. E221: Radio 15 Broadcast Notes, p. 3.

examine them before listening. One of the two self-assessment questions which it is suggested should be attempted after listening to the programme, is related to the diagrams. Finally, the broadcast notes contain short biographical details on two of the characters in the play - students are referred back to notes accompanying earlier plays for details of other characters - and background notes on the fictional situation presented in the programme.

None of the final three of the sixteen units in the course is covered by the continuous assessment system. Indeed, if they are keeping to the recommended schedule, students will probably - at the time of transmission of Radio 15 - be starting work on the last tutor-marked assignment which covers units 10 to 13 (See Table 3).

Table 3.* The Radio Plays, and Relationship of Radio 15 to other Course Materials

Date	Printed Material	Radio Programmes	Assignments
Feb. 12	1	1 (1st Radio Play)	
April 9	5	5 (2nd Radio Play)	
Sept. 21	15: recommended start		
24		15 (3rd Radio Play) 1st tx 18.25	
23		15 2nd tx 16.20	TMA 04 due (Units 10-13)
Oct. 4	15: recommended finish		
Oct. 12			TMA cut-off (Units 10-13)

The Programme: Content and Purpose

Like the two preceding plays in the course, Radio 15 is set in a rural community in the imaginary County of Wealdshire. The background to Wealdshire and to the various characters introduced in the plays has been built up through extensive documentation to the earlier plays (the documents include a map of the area, extracts from and letters to local newspapers, notes on the local schools, and biographical details of community members). A certain amount of continuity, both in terms of location and characterisation, is maintained throughout the three plays, although none depends on either of the other two for comprehension. Each play is introduced briefly by an announcer who sets the scene. All three attempt, in a series of short scenes, to portray, through fictional characters, actual situations from which the elements can be analysed and which should indicate the kind of forces and pressures in operation in a wide variety of cases.

Radio 15 deals with the decision-making problems involved in establishing a system of comprehensive education. A course of action and a building programme having been agreed, it becomes necessary to reconsider previously taken decisions

*Tables 1 and 2 are contained in the General Introduction (see contents page).

in the light of factors thrown up by the need to economise. The programme is thus concerned with human response to an enforced change of decision, and attempts to demonstrate "the complex nature of what may appear at first sight a straightforward course of action".[4] At the same time, the programme is directly linked to Unit 15 in that it introduces through the interaction of the characters, some of the problems involved in actually applying the decision modelling techniques described in the text in a complex situation.

The programme objectives indicate a strong intended relationship between radio programme and correspondence text. As listed in the broadcast notes, these are:

1. To demonstrate the difficulty of introducing management skills into a system which has not had experience of them.
2. To illustrate the dangers of analytical techniques which have not been fully assimilated.
3. To show that the use of such techniques may rebound on the user.

Discussion with Donald Holms, producer and writer of all three radio plays, and with Vince Houghton and Tony Gear, the two other course team members who collaborated in the planning of Radio 15, indicated some rather more diffuse aims for the programme. These were:

4. To counter the more formal approach to decision planning and modelling taken in the printed text with an attempt to stress the human factors involved.
5. To emphasise the affective dimension in decision-making.
6. To illustrate the importance of the prejudices and intuition of 'flesh and blood' people in influencing decisions which are taken.

In planning the three radio plays, certain problems were foreseen by the producer/writer in the translation of the strictly educational purposes of the programmes into credible dramatic episodes, conforming to the standards of professionalism which students might be expected to carry over from general network listening. A particular dramatic limitation - in terms of character and plot development - was imposed by the necessity to work within the twenty minutes duration, including introductory and closing announcements, of Open University radio programmes. Consequently, the opinion of a senior radio drama producer with the BBC's general programme service was sought on each of the three scripts; in addition, this producer was present at each final recording to comment on the acceptability - in purely dramatic terms - of the productions.

Method

Broadcast notes for all three of the plays were studied and the first two plays were listened to. After a quick reading of the printed material for Unit 15, the third play (Radio 15) was heard a couple of times. Fairly lengthy discussion with Donald Holms, and shorter talks with Vincent Houghton and Tony Gear, led to the clarification of the sort of questions which it was felt valuable to ask through questionnaire. These related to:

(a) Radio 15 itself.
- whether it was found useful and enjoyable or not, and why.
- what the programme was felt to have set out to do.
- extent to which it had, in fact, achieved its original aims.

4. E221: Radio 15 Broadcast Notes, p. 3.

- whether a second hearing had assisted overall comprehension and appreciation of the programme.
- whether links between programme and text were discerned, and just what these links were understood to be.

(b) Related Print Material to Unit 15.

- whether the broadcast notes had been found useful and why.
- whether any difficulty had been caused by the diagrams in the notes.
- whether any difficulties had been met in the correspondence text.

(c) Use of the Dramatic Form.

- which, if any, of the three plays students had heard.
- whether, in principle, it was felt that the dramatic form was appropriate to the presentation of material of the type covered in E221.
- whether these particular plays were felt to have made a worthwhile contribution to the course.

(d) General Use of Radio in the Course.

- how many programmes had been heard.
- estimated value of the radio programmes heard.

The aim was not only to discover whether this particular programme (Radio 15) had worked and why, but to build up a picture of usage of, and attitudes to, radio in the course in general. This it was hoped, together with indicators of the extent to which students were coping with other aspects of the course, should help explain attitudes towards use of the dramatic form in principle, and reception of these particular plays.

A questionnaire (Appendix B) was designed along these lines and mailed to a random sample of 348 of the 1022 students registered for E221 in September 1974 (34%). The questionnaire was mailed to arrive on Monday 30th September, six days after the first transmission of Radio 15 and two days after the repeat broadcast. Reminder letters were sent to students who had not replied at intervals of ten days and seventeen days after mailing of the initial questionnaire. A total of 243 students (70% of those sampled) responded: of these, six had already withdrawn, so we were left with 237 usable questionnaires (among these were a number completed by students who, although having already withdrawn, nevertheless responded to certain sections of the questionnaire). Excluding from our non-respondents those who had already withdrawn, though were still registered as "live", we received a response from 76% of our original sample.

Feedback already received from tutors through the CT4 system had suggested to some course team members that tutors had reacted negatively to the use of the dramatic form in this way. However, the CT4 tends to suffer from low response rate and its reliability is thus sometimes suspect. It was therefore decided to send the questionnaire to all 49 tutors on the course to discover, through a more detailed range of questions, how they judged the contribution of the plays. The same system of reminder letters was used and a total of 28 tutors (57%) returned usable questionnaires.

It was felt that a loosely structured group discussion would be fruitful in providing insights into student reaction to, and problems caused by, use of instructional material presented in dramatic form. However, discussion with Staff Tutors in several regions suggested that, given the time of year - it was late

September and students were already preparing for examinations - attendance at study centres was low, and that it would be almost impossible to guarantee the attendance of a sufficient number of students to provide a useful discussion forum. Nevertheless, we were anxious, because of the novel nature of the programmes, to obtain from students their spontaneous response to the plays. Accordingly, we arranged through Fiona Palmer of the London Regional Office a Conference Call link-up with six students in the London Region: these students were linked, through an operator, with each other and with a central loud-speaking telephone at Walton Hall. Here the evaluator, and four members of the course team - including the producer of the plays and the author of Unit 15 - were gathered to ask and answer students' questions.

Radio 15 was first played over the telephone lines to the students, who had not been pre-warned that the discussion would centre on this particular programme. The intention was that the discussion should be as free and wide-ranging as possible. However, the nature of the situation - for instance, the fact that no visual interaction could be developed - meant that the evaluator was forced to keep the various participants continually involved by questionning them rather more directly than would have been the case in the usual face-to-face situation. Nevertheless, many useful and stimulating points were raised quite spontaneously by students. The discussion was subsequently transcribed and is included in the report (Appendix C).

Other information drawn on in the study came from the CT4 - course tutor feedback (Appendix G) and from spare blocks used for feedback purposes on CMA forms (Appendix F). While the course tutor information covers the entire course (although response at the end of the year was very low), the CMA feedback does not cover Radio 15 and the information which does exist on earlier parts of the course treats reaction to the radio programmes in aggregate rather than individually. Neither of the two other sources is particularly helpful, therefore, in throwing light on questions raised by the present study.

Data from a range of questions answered by students on our questionnaire has been subjected to a calculation of two standard errors and we can say that within a range of $\pm$ 3% to $\pm$ 7% the data from our study is representative of the student population as a whole.

However, analysis of respondents and non-respondents shows that our respondents were significantly more successful in completing the course than were those of our sample who did not reply.

TABLE 4. Respondents and Non-Respondents
Success and Failure in Course Completion

	Successful in completing course	Unsuccessful in completing course	Total
Respondents	218	25	243*
Non-Respondents	69	36	105
Total	287	61	348

χ^2 = 28.4 at 95% level.

*includes 5 who responded, but did not complete questionnaire, having withdrawn from the course.

It should be borne in mine then, when examining the results of the evaluation, that the responses are those of a rather select group from the total sample.

Listening Figures

The programme had disappointingly few listeners, with just over a third of students and about a fifth of our tutor respondents listening at least once.

TABLE 5. Students and Tutors Listening to Radio 15

	At least one transmission		Tues. 18.25		Sat. 16.20		Both times		Taped it		Didn't listen		Total respondents	
	Nos.	%	Nos.	%	Nos.	%	Nos.	%	Nos.	%	Nos.	%	Nos.	%
Students	83	35	45	19	29	12	5	2	39	16	154	65	237	100
Tutors	6		4		2		-		2		22		28	100

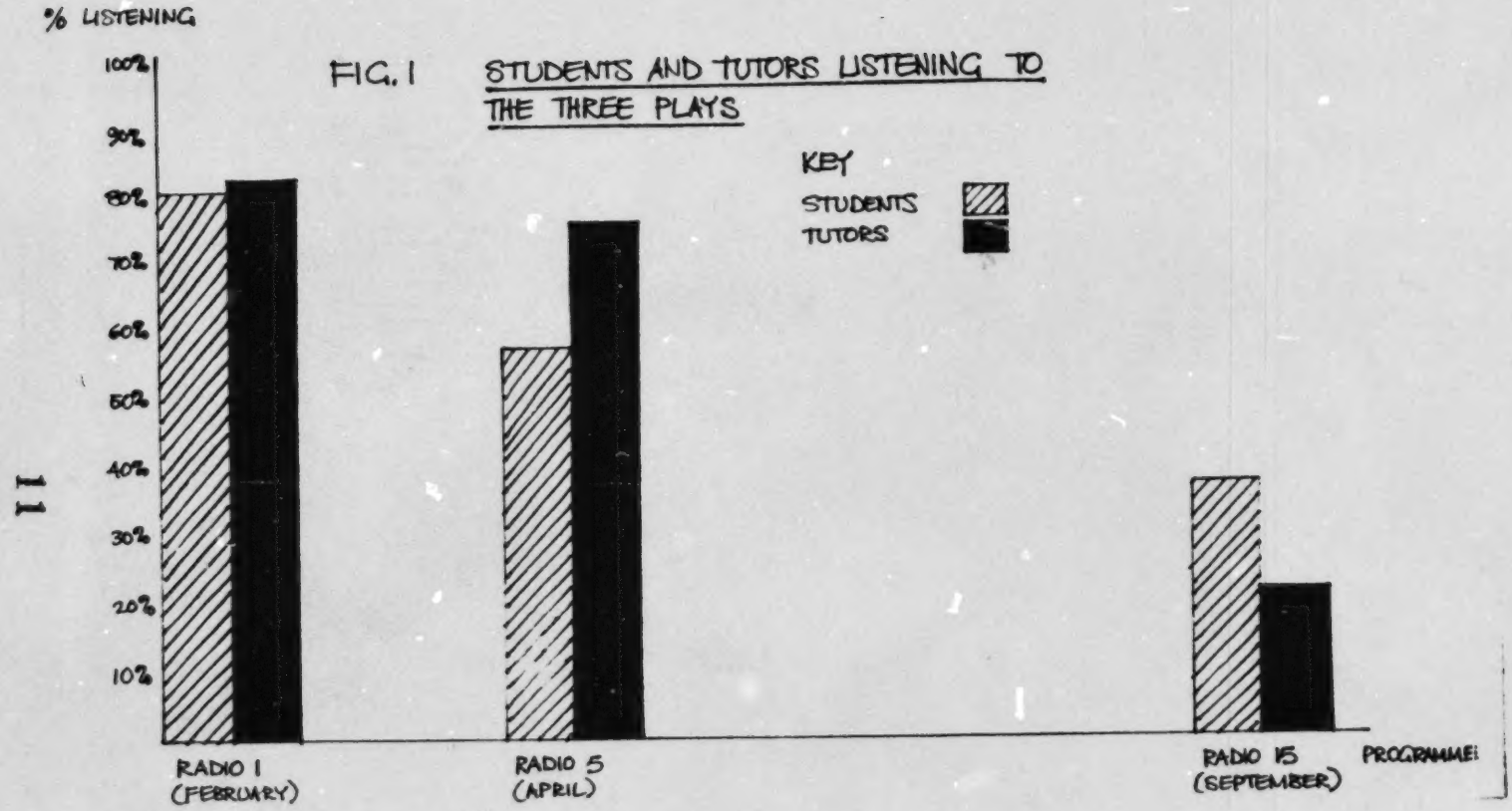
It is worth noting that, of those students who did listen, almost half taped the programme and that the weekday evening slot was more popular than the weekend afternoon transmission. Perhaps it is not surprising that the penultimate programme of the course attracted only a small proportion of the potential audience (of both students and tutors - although one might have expected rather more of the latter to persist in listening, since this was the first year of the course's life). Moreover, it should be remembered that neither the programme itself nor the related correspondence text was linked to continuous assessment, and since - as we shall show later - many of the students were working far behind schedule, it is likely that these students particularly were anxious to catch up with their written work and to start preparation for the final examination.

If we look at the numbers listening to all three plays we can see the normal fall-off pattern through the year. (Figure 1 overleaf).

It is interesting that while both students and tutors do stop listening as the year passes, the tutor fall-off is initially more gradual than that of students, though by the penultimate radio programme proportionately more students are listening. If we compare our data with that provided by the CT4 we find confirmation of the trend of tutor fall-off. (Figure 2, p. 8). Note, however, that although according to our evaluation data only a fifth of tutors heard Radio 15 (Figure 1), CT4 reports indicate that almost half listened to the programme (Figure 2). This can be attributed to the low response to the CT4 in the later part of the year. As long as the response rate to the "on-going" CT4 is comparable with that to our "one-off" evaluation questionnaire - i.e. up to the CT4 reporting period covered by Radio 9 - the data collected by both is also comparable (i.e. listening figures for Radio 1 and 5 are similar). However, once response to the CT4 drops - eventually falling to only 33% of tutors responding in the final reporting period - the listening figures it reports are inflated.[5] There is, of course, the possibility that since our questionnaire asked students and tutors towards the end of the year whether they had heard programmes broadcast many months earlier, there may have been some error in replies. However, since the plays were a novel use of radio, there should have been relatively little difficulty in recalling them.

5. See BATES, A.W. (1975). Broadcast Evaluation Report, No. 3: T291: "Instrumentation" for further discussion of the effect of response rates on viewing/listening figures.

FIG. 1 STUDENTS AND TUTORS LISTENING TO THE THREE PLAYS



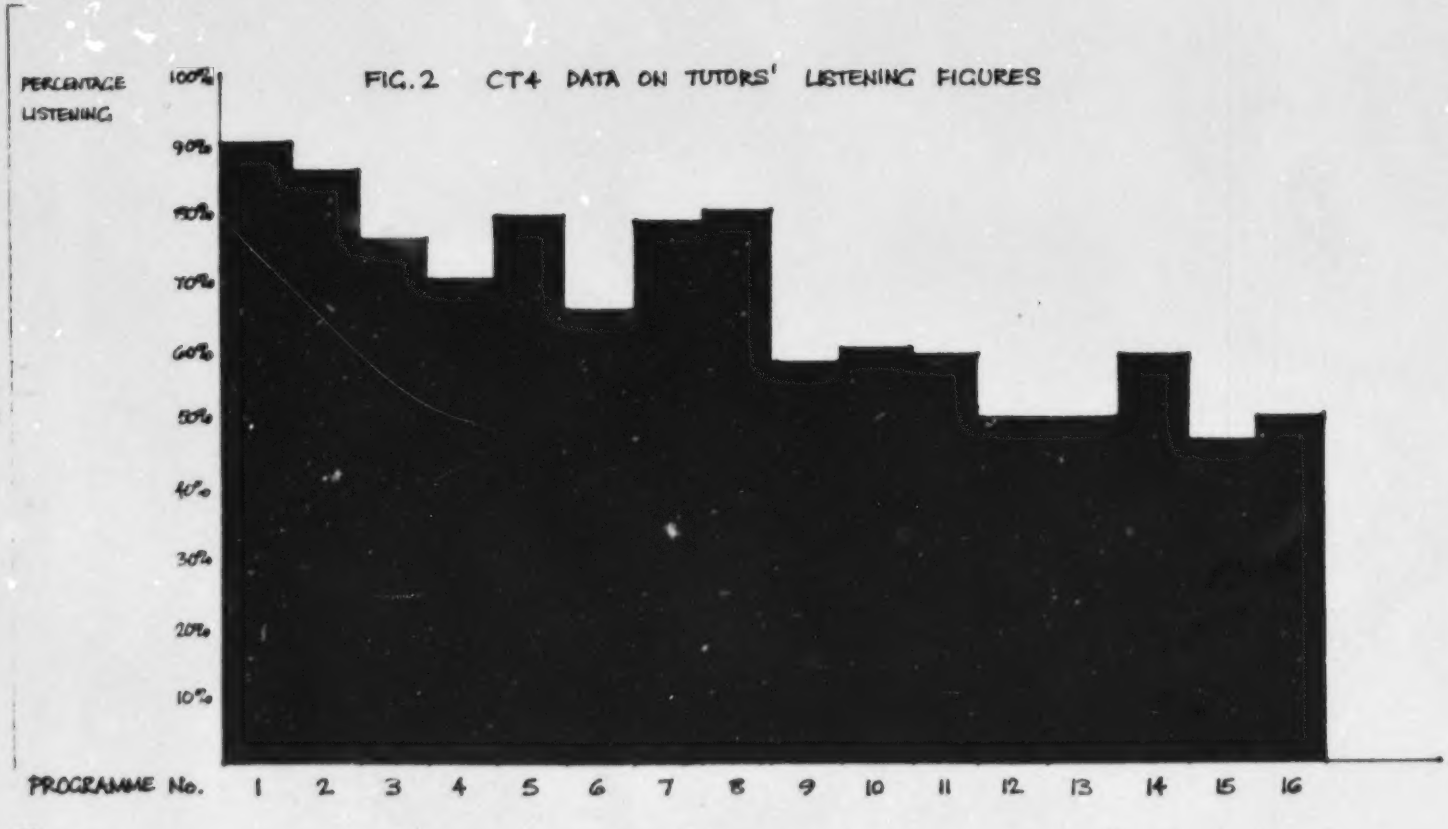


FIG. 2 CT4 DATA ON TUTORS' LISTENING FIGURES

If we look at the number of programmes heard over the entire year, we find some notable differences between students' and tutors' listening patterns. (Figure 3 overleaf). We can see that, while most tutors heard most programmes, students' use of the radio broadcasts varied much more: the flattened curve suggests that students are less motivated to listen to the programmes - some listening to only a few, and about the same proportion listening to most. On the other hand, those students who heard Radio 15 were significantly (χ^2 = 73. 5) more persistent radio listeners than the majority of our respondents: all but three had heard more than half of the programmes, and indeed three-quarters of the Radio 15 listeners had heard at least three-quarters of the E221 radio broadcasts.

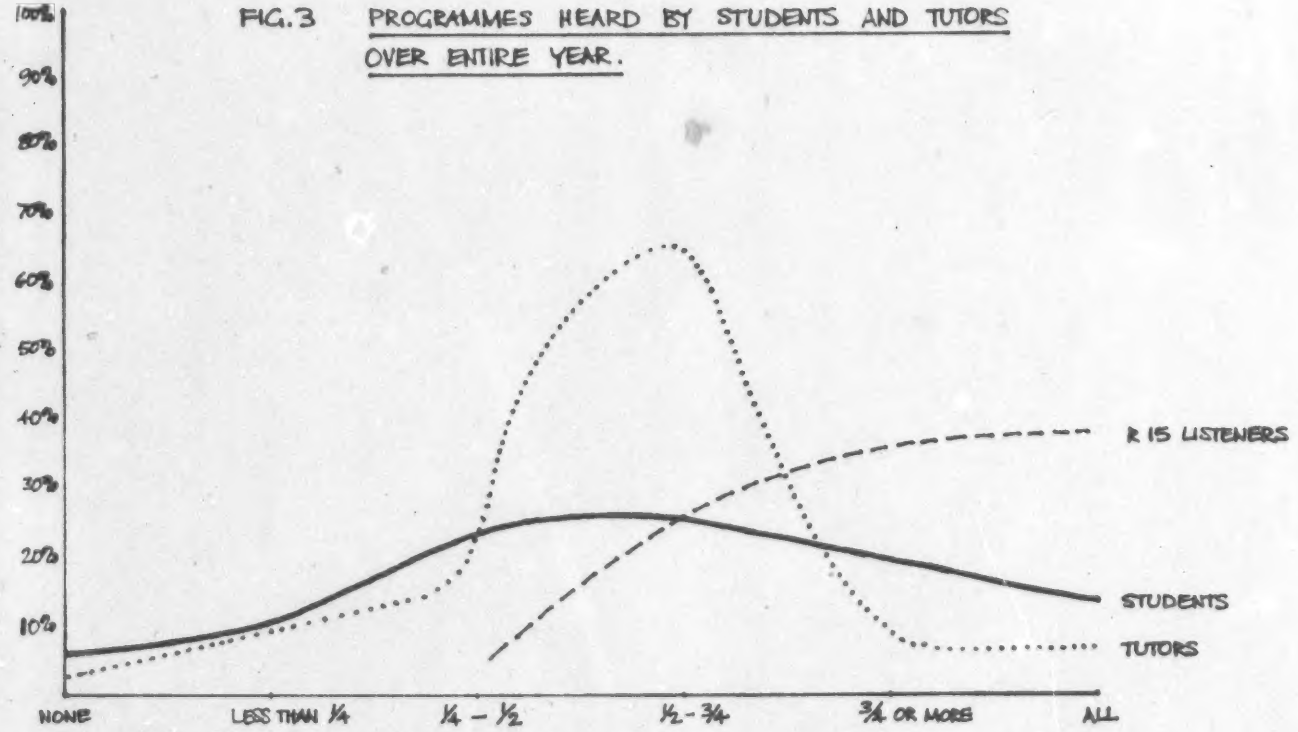
Interesting differences - none actually statistically significant - exist both between listeners and non-listeners, and within the group of listening students. Final examination results indicate that those who listened to Radio 15 did rather better in the course than those who did not hear the programme (half of the "listeners" gaining a "good" pass-grade 1 or 2 - as opposed to just over a third of the "non-listeners"), while only a quarter of those who failed to respond to the questionnaire gained a pass at these levels. And if we take the total number of E221 radio programmes heard, we find a similar pattern: half of the students who heard half or more of the programmes gained a "good" pass, while just a third of those who heard less than half did so. Looking now within each of these three groups - Radio 15 listeners, non-listeners and non-respondents - we find that 'B' year students (in their third year of OU study) did consistently better than either 'A' or 'C' year students, with the 'A's' doing rather better than the 'C's'. This may perhaps be attributed to the number of students taking a first post-foundation course (i.e. 'C' students) who dropped out - proportionately more than 'A's' or 'B's' - and to the possibility that 'A' students, in their fourth year of OU study and still taking second-level courses, may be finding their studies harder going than others who joined with them but have gone on to take third and fourth level courses.[6]

Reasons for not Listening

Of those 154 students who did not listen to Radio 15, over two-fifths (66) indicated that they had missed the programme due to unavoidable or unforeseen circumstances - illness, broken radio or recorder, reception difficulties, work commitments or just forgetfulness. We cannot, of course, assume that all of these students would, in fact, have listened to the broadcast had circumstances permitted; however, clearly many of those in this group were fairly regular radio listeners - the majority having heard more than half of the E221 radio programmes - and it is not unreasonable to suppose that most had made no absolute decision not to listen. On the other hand, the remaining three-fifths of our non-listeners clearly had made a prior decision not to listen - either because they found radio of little value or because of other factors which entailed their exclusion of the radio component: for example, not possessing a VHF radio, living abroad, being unable, or unwilling, to organise themselves to keep to the schedule dictated

6. See GALLAGHER, M. (1975). Broadcast Evaluation Report, No. 4: S24: "Industrial Chemistry Component" for further discussion of this point.

FIG. 3 PROGRAMMES HEARD BY STUDENTS AND TUTORS OVER ENTIRE YEAR.



14

by the broadcasts. Not surprisingly, at this late stage in the year, a fairly large group of students (24 - one sixth of all non-listeners) said that as they were working behind schedule they had decided to abandon the radio broadcasts, since these were not "essential". About an eighth of all non-listeners explicitly said that they skipped Radio 15 because of disappointment in previous radio programmes - either in courses taken earlier (15 students) or in E221 (5 students): of the latter group, two specifically mentioned the previous radio plays in this course as having been unhelpful.

In summary then, we can say that over a third (37%) of our total student respondents consciously decided against listening, while a further quarter (28%) who might have listened, were prevented from so doing by "circumstances beyond their control". Not surprisingly, tutors were on the whole unlikely to admit to having rejected the radio programmes, though one said he never listened because of "lack of financial incentive". Most tutors said they missed Radio 15 for unforeseen circumstantial reasons, though 7 - a third of all who missed the programme - said that "pressure of work" (i.e. non-OU work) had forced them to omit the broadcast. Certainly, the beginning of a new academic year seems to have led to difficulties for part-time tutors in fulfilling their commitments to two separate employments.

Those who Listened more than Once

Of those students who did listen to Radio 15 it is interesting to note that almost half (47%) taped the programme: these students thus had the opportunity of listening to the programme more than once if this appeared to be necessary or desirable. In fact, by the time of questionnaire completion, almost one third of our student listeners had heard the programme more than once, while almost one tenth said that they would have liked to hear it again, but were unable to do so. Little strictly comparable data exists as a measure of the extent to which this particular programme was typical in the numbers listening more than once, and in any case, the very low overall listening figures for the programme (i.e. only just over a third of the total student sample) and the fact that those who did listen were more regular radio listeners than the majority of students (see p. 9) may mean that the apparently rather high proportion listening more than once could be a feature of this particular group of students rather than of the radio programme itself. However, the comments of those who did want to listen to the programme again indicate that students felt that this sort of format did require several hearings for full appreciation: "I felt there was more to be got out of this type of programme from a second hearing," and this point was raised spontaneously by the students during our telephone group discussion: "I think if there is any difficulty from the listener's point of view, it is the hearing of the programme at the most once or twice ... immediately after hearing it for the first time one may be lost over certain points." Most of our questionnaire respondents said that they sought "clarification" or "refinement" of certain points from a second hearing, though several simply wanted to listen again because of the programme's entertainment value: "fascinated by the characterization, and the manner in which the author skilfully made them interact".

General Attitudes to Radio 15: Enjoyment and Usefulness

The play was found not only enjoyable but useful by the majority of those students who listened to it, although a fairly large minority (about two-fifths) reacted negatively to its style or content.

TABLE 6. Enjoyment of Radio 15

	Very much		Quite a lot		All right		Not very much		Not at all		Don't know		Total listeners	
	Nos.	%	Nos.	%	Nos.	%	Nos.	%	Nos.	%	Nos.	%	Nos.	%
Students	9	11	35	42	28	34	9	11	1	1	1	1	83	100
Tutors	-		2		2		1		1		-		6	

Comments from students who enjoyed the programme indicated a general appreciation of the "practical and situational credence" which the play lent to the theory covered in the correspondence material. Terms such as "illuminating", "stimulating", "realistic" were commonly used by these students to express their reactions, and many found it enjoyable to re-examine "the study material in a situational context involving 'real' people". "Personalisation" appeared to make the theoretical concepts more accessible and comprehensible. The format of the programme was spontaneously and specifically singled out for mention by about a third of those who enjoyed the play and found it both "entertaining" and "easy to listen to": "I found it a pleasant as well as an informative method of applying course concepts"; "enjoyable as a play and also instructive"; "manner of presentation made it realistic and enjoyable as well as making the point"; "simple and interesting way of putting over use of network concept". For these students, then, the device of combining study with entertainment (or at least a more overt or intentional form of entertainment than is commonly employed in Open University courses) was clearly successful.

A further point made by students who enjoyed the programme was that because of the particular format used, concentration was less likely to slip[7] and the content was more memorable: "I find that I can recall material much more easily when it is presented in this form"; "I must emphasise this, by listening several times the mental picture developed and the story has become embedded in the memory"; "I think a play enables you to remember the underlying idea easily". This point was echoed by participants in the telephone group discussion: "I think this is the great thing about the plays. They do help one to remember, though what one remembers is obviously going to be different in every case. We're not all going to remember the same things. But I do remember the first play and I expect the other people do too, whereas if it had been a talk or a discussion or something like that, with all due respect we probably would have forgotten it". This statement met with the unanimous agreement of the rest of the group.

Finally, some students appeared to have built up a certain feeling of familiarity with the characters in the plays, thus adding to the interest with

7. See GALLAGHER, M. (1975). Broadcast Evaluation Report, No. 4: S24: "Industrial Chemistry Component" for discussion of the problem of concentration and radio broadcasts.

which they approached this particular programme: "easy to follow, especially as the situation and some of the characters are now well-known". Here again, the intention of the course team - to maintain interest through the provision of a certain continuity of characterisation - seems to have paid off in the case of these students, who appear to have identified with certain of the characters: "I am quite a 'Padwick' fan".

The main criticism of the programme from those who did not enjoy it, related to its inability to convince some students of its purported relevance to real people in real situations. Many of these students restricted their comments to general criticisms of what they felt was the "artificial" or "contrived" nature of the programme, while others were more specific in mentioning deficiences in the characterisation developed in the play: "personalities and interpretation of the actors proved irritating and distracting". A couple of others had difficulty in understanding the programme as anything other than entertainment, comparing it to "The Archers" or 'South Riding': "it seemed very unreal - more like fiction than fact, an air of 'South Riding' about it and although I enjoy 'South Riding' I do not take it very seriously". The comments of these students were related to those of another small group of students who felt that the programme "didn't really get anywhere" or that it was "not specific enough at this late stage of study". A few students had difficulty with the programme format - either specific: "difficulty in identifying voices and relating them to the situational standpoint of the individuals"; "confusion over who were the characters" - or general: "not quite sure of the relevance. A discussion could probably have been just as good". Finally, one or two students attributed their lack of enjoyment of the programme to inadequate preparation for it: "about two units behind at the time", "not giving sufficient preparation prior to the programme".

Comments of the six tutors who heard the programme generally echo those of students, the only new element being introduced by the tutor who found the broadcast "too concentrated".

Turning now to the extent to which this play was found useful by students and tutors, we find similar proportions reacting positively and negatively and the reasons given for these reactions falling into roughly the same categories as those given in relation to the enjoyment question.

TABLE 7. Usefulness of Radio 15

	Very useful		Fairly useful		Not very useful		Not at all useful		Don't know		No answer		Total listening	
	Nos.	%	Nos.	%	Nos.	%	Nos.	%	Nos.	%	Nos.	%	Nos.	%
Students	10	12	36	43	33	40	1	1	2	2	1	1	83	100
Tutors	-		2		2		2		-		-		6	

Here again, students praised the "realistic" and practical nature of the programme, stressing that an extra dimension had been added to the printed material: "unit 15, in constructing decision trees and networks, was unable to give a true perspective to the personal contribution of those concerned and the interplay that produced the graphic results"; "it related models to a 'real' situation perhaps

more effectively than in the text"; "the media enabled one to depart, in in imagination from cold print and visualise the pragmatic". Again and again, the issue of "memorability" was stressed: "I find a programme of this nature helps me to remember from the 'story content' many facts and views that otherwise I tend to forget. I think of the playlet and the facts fall into place"; "I feel sure the play will linger in my memory whereas the units may not do so"; "dramatization presents picture which stays more clearly in mind". And though there was a comment - from a student who nevertheless enjoyed it - that the programme contained "too much padding", another student felt that it was "a meaty programme, but requiring conscious effort to relate to concepts throughout the course".

On the other hand, those who did not find the programme useful were critical of what they felt to be the play's lack of depth, and even of the specific format which, for some students, actually detracted from the main reason for listening, i.e. to learn: "insufficient depth of treatment and the play detracted from the information-giving process"; "too easy to be distracted away from its (supposedly) intended purpose"; "there were so many false touches the point(s) of the programme are almost lost"; "'drama' detracted from sense of learning purpose"; "the units and readings covered the points more efficiently. I found it a most unsatisfactory programme - or should I put it 'frustrating'". This point was also made by one of the tutors who, interestingly, compared this particular play to the two earlier ones: "the essential message was clouded by the dramatic form - in contrast to the other 'plays' on radio".

Students' Overall Reactions and General Understanding of the Programme's Purpose

In our analysis of the extent to which the overall intended purpose of the playlet was understood, we have followed the procedure outlined in earlier reports in this series i.e. drawing not only on answers to the question which asked directly for a statement of what this purpose was perceived to be (these statements varying enormously in their depth and scope), but on responses to the questionnaire in its entirety, paying particular attention to the content-based questions, those pertaining to use of the related print material and those probing attitudes to the playlet.[8]

A problem arises here, however. Two of the content-based questions - those dealing with students' understanding of one of the diagrams in the broadcast notes - were attempted by less than two-fifths of all listeners. Understanding of the diagram depended on an understanding of the radio programme, and answers to these particular (p. 22A) questions provide a good indication of students' awareness of an important aspect of the programme's educational intent and its links with the material covered in the correspondence text. However, with this information missing for more than three-fifths of listeners and on the assumption that a non-response cannot be classed as a mal-response, we have broken into two parts the analysis of students' understanding of the programme. Firstly, in the section which follows immediately, we examine the extent to which students expressed a clear understanding of the programme's overall purpose - i.e. illustrating the more informal, human

8. See GALLAGHER, M. (1975). Broadcast Evaluation Report, No. 2: E221: "Cumbria Case Study" and No. 4: S24: "Industrial Chemistry Component" for details of the necessity for a rationale behind this procedure.

factors involved in decision planning and modelling - and of its general relationship to the correspondence text. We have not referred to use or understanding of the diagrams in this section. Secondly, in the subsequent section dealing with print material, we examine in more detail, through the "diagram" questions, students' expressed understanding of the content of the radio programme, thus arriving at some measure of the extent to which the play actually achieved what it set out to do. We are then in a position to posit the "maximum" and "minimum" proportions of students who completely understood the programme and its purpose.

The first part of our analysis leads to the identification of five distinct groups of students, summarised in Table 8. (Reactions of listening tutors are also included).

TABLE 8. Overall Reaction to Radio 15

	Group 1		Group 2		Group 3		Group 4		Group 5		All listeners	
	Nos.	%	Nos.	%	Nos.	%	Nos.	%	Nos.	%	Nos.	%
Students	27	32	7	8	18	22	16	19	15	18	83	100
Tutors	1		1		3		-		1		6	

Group 1: Enjoyed, useful, understood.
Group 2: Enjoyed, not useful, understood.
Group 3: Not enjoyed, not useful, understood.
Group 4: Enjoyed, useful/not useful, not understood.
Group 5: Not enjoyed, not useful, not understood.

The largest single group - about a third of the students - is made up of those whose reaction was entirely positive: these students enjoyed the programme, found it useful and understood its purpose. A recurring term in their comments on the play is the "realism" which it conveyed in its "attempts to get us back to the world of reality and away from pure theorising". Students enjoyed this "situational realism", found it useful to have "modern management techniques placed in perspective", and saw the purpose of the programme as providing "a practical example of the use of network and management skills" and/or as "highlighting the difficulty of introducing management skills". Those in this group were more likely to have read the associated unit text before listening to the programme than was true for the sample as a whole. It is not surprising then, that these students were readily able to see the connection between the printed text and the programme, and, having already studied the text - which incidentally, they were no more likely to find easy than others in the sample - to appreciate the radio programme's "complementary" function: "it 'rounded off' the discussion about management planning" and helped students "appreciate the practical implications of planning and decision models". This group was, in fact, significantly ($\chi^2 = 6.23$) more likely to find that the programme added appreciably to the material in the printed unit. Moreover, these students indicated a significant ($\chi^2 = 9.12$) and unqualified approval of both the principle of radio

drama in education and of the contribution of the E221 plays to the course. In fact, although these students were not more regular radio listeners than others in the sample, they did value radio in general more highly than was so for the total sample: while one-third of those in Group 1 said that they had found the radio programmes "of great value", only a fifth of all radio 15 listeners and about an eighth of the sample as a whole said this.

Group 2 consists of a very small number of students - 7 - who, although enjoying the programme and understanding its purpose, nevertheless did not find it useful. None of these students had found the text of Unit 15 particularly difficult. However, although they found the radio programme "entertaining" as "a change", they would have preferred a programme aimed at helping them more directly with the points covered in the text: "I would have appreciated a more thorough demonstration of the use of the models". Again, this group was more than normally committed to the principle of radio drama and felt that the plays in E221 had made a useful contribution to the decision-making course, although several distinguished the third play from the preceding two, finding Radio 15 "something of a disappointment" in comparison. It appears that attitudes to the radio dramas set by the earlier plays were sufficiently positive, in the case of these students, to withstand a sense of disappointment: for although there was some criticism of the "rather contrived" relationship between programme and text, students still valued it as "entertainment". It is possible also, that as none of this group had any particular problems with Unit 15 and none was behind schedule - all had read the correspondence text before hearing the broadcast - they could afford to indulge in the enjoyment of something which they perceived as entertaining, if somewhat unsatisfying as instructional material. (The differences - in both purpose and style - between Radio 15 and the two earlier plays, and some of the resultant problems for students, are dealt with in more detail later.)

The second largest group, Group 3, is composed of those students who, although understanding the programme's educational intent, neither enjoyed the play nor found it useful. Over a fifth of our student listeners came into this category, and it is worth noting that three of the six tutors who heard the programme also reacted in this way. Most of those in this group disapproved of the programme's format, finding it "artificial", "superficial" or "a waste of the medium". Some made specific criticisms of, for example, the "annoying dialect" or the "insipid characters", while others felt that it had "no point" or "didn't get anywhere" and consequently was "frustrating". This group all felt that the programme had added little or nothing to the content of the printed text: "to do so I think it would have had to concentrate far more on issues and alternatives". The group as a whole had rather more difficulty with the text of Unit 15 than was true for the total sample: this difficulty may well have been related to the "frustration" and "annoyance" which they felt towards the play and is reflected in many of the comments: "I would have found it more useful if decision trees and models had been more clearly explained"; "the time analysis programme was only mentioned briefly at the end of the broadcast"; "far more attention could have been paid to the five options, and the evaluation of them"; "when getting down to details it was cut off". Most of these students would clearly have preferred a more straightforward piece of instructional - almost tutorial - material, and for the majority this was not merely a result of particular difficulties experienced with Unit 15 (although this almost certainly added to their sense of frustration) but was a feature of their general lack of sympathy with the principle of the presentation of educational

material in dramatic form - three-fifths being against the idea: "the meat of the material could be delivered in less time in the printed form"; "too great a proportion of the time available had to be used in setting the scene and dealing in trivia"; "I prefer discussions or talks. With the playlets I find that useful facts become lost in idle chatter"; "the information can be conveyed just as easily by a written case history". This lack of sympathy with the dramatic format is the factor which distinguishes this particular group from the students described in Group 2, the latter being more concerned about what they considered to be the rather tenuous links between radio programme and correspondence text for Unit 15.

The two final groups identified in our analysis each comprises just under a fifth of those who listened to the programme and each consists of students who failed to understand the purpose behind this particular play. In Group 4, we find those students whose reaction to the broadcast was on the whole positive - in that they enjoyed and generally found it useful (although a few did not find it useful) - but whose understanding of its purpose was somewhat limited. Most of these students latched onto the "human" element of decision-making introduced in the programme, explaining the purpose as being "to show the reactions of different people to a particular situation"; "to show interplay between various personalities connected with decision taking"; "to present in dramatized form problems surrounding reorganization". While this "personalization" of decision-making problems was clearly one aspect of the programme's intentions (see p. 3) it could not be dissociated from the more specific aim of expanding on some of the practical difficulties of actually using network and modelling techniques. Indeed the "personal" or "human" dimension of the play was in a sense a vehicle for the exploration of the relationships between techniques and people. It was this relationship which the students in Group 4 failed to grasp. A number of interesting points emerge with regard to this group: they were no less likely to have read Unit 15 before listening than was the case for the sample as a whole; moreover they appeared to have no abnormal difficulty with the content of the text (i.e. they had about the same amount of difficulty as did the total sample); all but one had read the broadcast notes. Yet they were unable to discern any direct link between the programme and the printed text: as one put it "don't think the written material, apart from Block 1, has much relationship to Radio 15". Now if we look at why these students enjoyed the play, we find that they valued it as "entertainment", rather than for any definable educational contribution which it might have made. It was, for example "a change from the usual lecture or discussion", it was "entertaining", or "nice and soothing after a hard day's work". Again, some had become "involved" with the play's characters: "one has got to know the characters in the series of plays and I have developed quite an interest in their progress", while others seemed to simply like drama: "I have enjoyed all the dramatizations of the Dunchester scene". It appears that these students were content to receive the play, almost as a form of relaxing "aside" which, while being loosely related to the overall aims of the course, was not specifically tied to any particular theme. Students in this group were extremely regular radio listeners - half of them had heard all of the E221 broadcasts - and were, with one exception, highly committed to the principle of the use of radio drama for educational material. Indeed, a further interesting feature of the group was their almost completely positive attitude towards the various material: Radio 15, broadcast notes, the plays in general, radio in general, the Decision-making course -

all were enthusiastically lauded. It is conceivable that this very enthusiasm led these students to immerse themselves in the drama to such an extent that they lost sight of the surface connections between the broadcast and the written text.

Lastly, in Group 5, we find those students - again about a fifth of all who listened - whose reaction to the programme was uncompromisingly negative: they neither enjoyed the programme nor found it useful; moreover they did not understand its purpose. While two of this group did see the purpose of the programme in terms of its underlying the "personal" elements of decision-making, the remainder failed completely to show any real understanding of the play's educational intent. Some simply refrained from saying what they thought the purpose was, while the uncertainty of most of the others was revealed in their comments: "not sure: an example of relationships and decision-making to be quoted in exams?" or "possibly to show that anyone can change their decisions"; while another was "puzzled as to which conclusion I should have reached". Two outstanding characteristics of these students were, firstly, the extent to which they were struggling with the course materials in general, and secondly, their lack of sympathy with the dramatic format. A quarter of these students said the work-load for E221 was "much too much": this compares with about an eighth of all listeners. A similar difference is found in the numbers who managed to read Unit 15 before listening. Indeed at the time of questionnaire completion, half of those in Group 5 had still not read the text: they were clearly well behind schedule. Moreover, all but one of those who had read the text before listening had considerable difficulty with it. Again, proportionately more of this group failed to read the broadcast notes than was so for the total listening sample. It is perhaps not surprising, then, that these students failed to understand the purpose of the programme, coming to it, as most of them did, without the necessary preparation. Nor is it surprising that, harassed and behind schedule, most of them found the use of dramatisation something of an imposition on their time. Many made this particular point, finding the play "time-consuming" or "a waste of time"; "plays need too much sorting out", "I prefer straightforward lectures - stating facts - not leaving hard-pressed students to pick the bones". Somewhat surprisingly, these students were above average - among Radio 15 listeners - both in the number of E221 programmes they had listened to, and in the value which they placed on radio in general in the course. It is worth noting that, although obviously in some difficulty - at least in terms of keeping to schedule - these students had not discarded radio, as others taking the course had already done (see p. 11), but had listened to most of the programmes and found them of value. However, of all the student listeners, this group was least in favour of the principle of radio drama in education, and placed least value on the contribution of these three particular plays to the E221 course. These students then, like those in Group 3, looked to radio for more direct help with the course components than they could reasonably have expected from the plays. The important distinction between the two groups is that the struggle which those in Group 5 were having to keep up with the course materials meant that they were generally ill-prepared to listen to the programme, and that they appeared to "skim-listen" rather than apply any great concentration to the content. While those in Group 3, although antipathetic to this sort of teaching and/or frustrated in their search for direct help with the difficulties of the printed text, listened closely to the programme and subsequently made detailed, specific criticisms of it, the students in Group 5 - perhaps because they did not really know what to listen for, and perhaps

experiencing general difficulty in concentration due to a felt need to "hurry" and "catch up" - seemed to simply "gloss" the play and then make criticisms of a very general nature.

Reviewing the position of students in all five of our groups, we can say that Radio 15 was, on the whole, successful in that just under two-thirds of our listeners appreciated its aim of illustrating aspects of the relationship between modern management techniques and the people who are in various ways affected by them. However, about two-fifths of those who listened felt that the approach taken in the programme - that of presenting the relationships clothed in dramatic terms, and of giving the programme a human, personal theme rather than a problem-solving orientation - was not really appropriate in view of the difficulties presented by the material in the associated text.

Relationship of Print Material to Programme: Success of the Play in meeting its Objectives

As we have already noted, (p. 3), the programme objectives indicate a strong intended relationship between radio programme and correspondence text. The play introduces a particular situation to which the decision modelling techniques described in the text can be applied, and throughout the programme reference is made to the various "options" open to the decision-makers. These options are represented in one of two diagrams (p. 22A)in the broadcast notes (the other is a representation of the present and planned educational situation in Wealdshire). No written explanation accompanies the diagrams in the notes, but students are asked, as a self-assessment question after listening to the programme, to rank the various options listed. The extent to which listeners are able to make a sensible ranking of these options is thus a reasonably good indication of their understanding of the issues raised in the programme, and, moreover, of their ability to relate such issues to the mechanics of decision-modelling as explained in the text: it is thus a fair guide to the programme's success in meeting its objectives. Also of importance, however, will be use and grasp of the Unit 15 correspondence text, and any particular difficulties caused by the lay-out of the diagrams: problems caused here will obviously affect ability to respond to the "option" questions.

We have already shown that pre-reading of the unit text was important in determining the extent to which the programme's overall purpose was understood (see preceding section). Indeed, students had been advised of the importance of studying the text before listening to the programme. However, the course calendar (Table 3, p. 2) allowed students, if working to schedule, just three days for study of the text before the programme's first transmission. Previous studies[9] have shown that most students do not, in fact, work to the recommended dates but pace themselves by the assignment due and cut-off dates. Radio 15 listeners, despite what we have said (p. 9) about their above-average ability, were no exception. (Figure 4 overleaf). Despite the "peak" of students (just over a third) who were in fact working on the text of Unit 15 when they heard

9. See, for example, AHRENS, S., BURT, G. and GALLAGHER, M. Broadcast Evaluation Report, No: 1: M231: "Analysis".

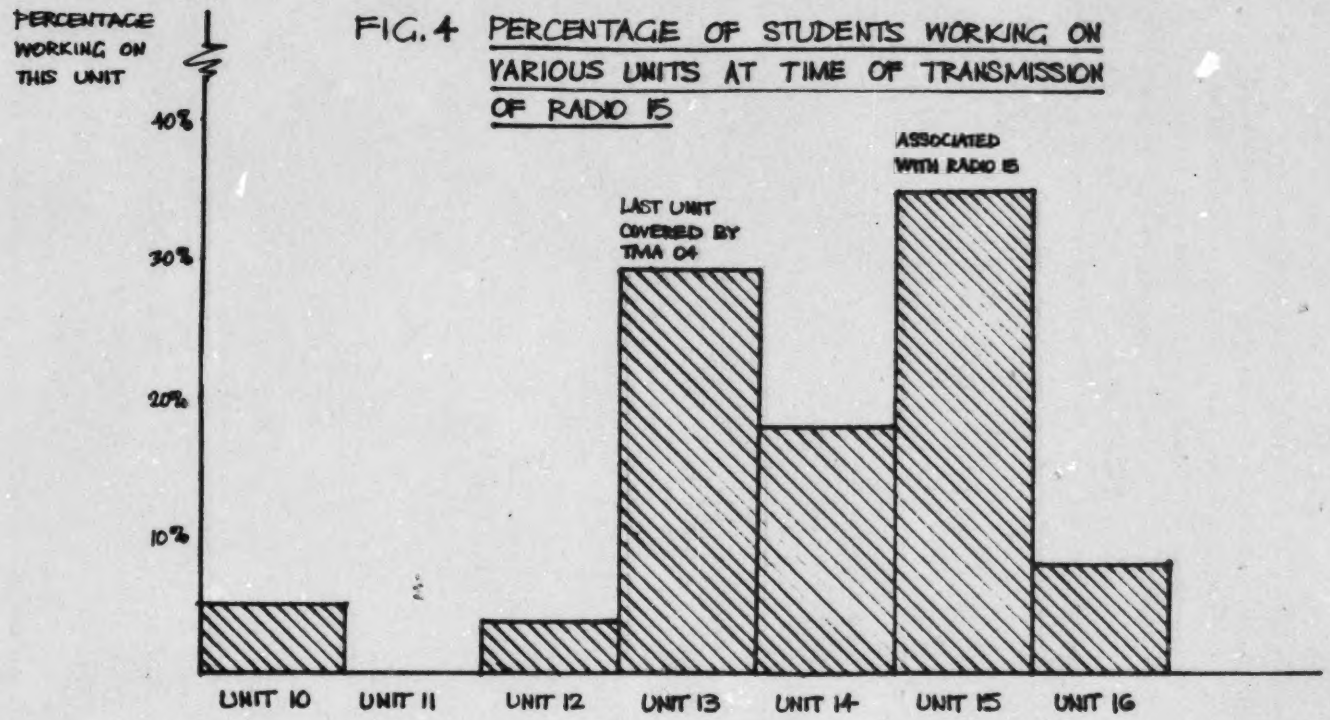


FIG. 4 PERCENTAGE OF STUDENTS WORKING ON VARIOUS UNITS AT TIME OF TRANSMISSION OF RADIO 15

the play, most students had not yet studied the text: indeed the second "peak" represents just under a third of students who were working on the last unit covered by the final assignment, due at that time (see Table 3). Incidentally, the final unit covered by the final assignment may well have been the last unit of the course for some students: by the end of October, just before the end of course examination, a fifth of all listeners had still not read the Unit 15 text.

The majority of listeners, then, (almost three-fifths) were disadvantaged when listening to the programme by not having first read the text.

Moreover, of those who did read it, most found the correspondence text hard going: three-fifths found it "very" or "fairly" difficult. The problems experienced were generally of a very basic conceptual nature. Although some students did refer specifically to the diagrams in the text, most of which they found "confusing" or even "frightening", the general problem was the much more fundamental one of just "understanding how decision trees are formed". As one student said during the telephone discussion: "Because I'm not used to thinking in this sort of way, I might have appreciated it better had the material been broken down into smaller steps to accommodate my own feeble insights". The root of most students' difficulty seemed to be an inability to cope with the combination of the novelty and complexity of the material and its fairly condensed presentation. Consequently, many appeared to fail to grasp the basic relationship between (a) a problem and (b) the model drawn to assist decision-taking with regard to that problem: "The models illustrated vary in shape; one wonders whether the problem dictates its shape and first how does one get started in drawing up a model".

Most students, then, listened to the programme without having looked at the text. But even of those who had read it, only a minority had a confident grasp of the concept of decision-modelling when they heard the radio programme. The play was not intended to clarify the theory or to assist with the mechanics of model construction. Rather, it was based on the assumption that listeners would already have grasped these basics, and aimed, as we have said, at providing a practical illustration of the application of some of the techniques described in the text. Most students (two-thirds) did not, in fact, appreciate this point, perhaps because, not yet having mastered the text, they would have preferred elucidation to illustration. We find a marked relationship ($\chi^2 = 17.94$) between ease of understanding of the text and the feeling that the play had been a useful addition to the printed material. Such students valued the opportunity given by the programme "to appreciate practical implications of planning and decision models".

Only about one-third of all listeners, then, recognised a direct and useful link between programme and text. To what extent were these students better able than others to understand fully the programme content and to express this understanding through their ranking of the five options earlier referred to? It is, after all, conceivable that students who had not read the text would be able, after one or more close hearings of the programme and careful study of the broadcast notes and contained diagrams, to understand the programme fully and to relate the issues raised in the play to a subsequent study of the text, thus allowing the programme to achieve its objectives. To investigate this possibility, we can examine the general use made of the notes, problems caused

by the diagrams - particularly Diagram 2 which lists the five "options" - and listeners' grasp of the implications of each of these options.

On the whole, students did read the broadcast notes - those who did not were, with one exception, working behind schedule - and found them useful. (Table 9). Moreover, of those who read the notes, all but six studied the diagrams.

TABLE 9. Usefulness of Broadcast Notes

	Very useful		Fairly useful		Not very useful		Not at all useful		Didn't read		All listeners	
	Nos.	%	Nos.	%	Nos.	%	Nos.	%	Nos.	%	Nos.	%
Students	14	17	44	53	15	18	2	2	8	10	83	100
Tutors	1		3		1		-		1		6	

While Diagram 1 caused no great problems (although a few students commented generally that both diagrams suffered from "insufficient explanation"), Diagram 2 (overleaf)(Appendix A) presented major difficulties: half of those who studied it said that they had trouble in understanding the diagram. One particular problem related to the diagram's time-scale heading: for instance, one student thought that the "197x" referred to school working days, another that it represented the number of children in the school. However, most students did not specify the difficulties posed by Diagram 2, simply stating that they had problems in "distinguishing between the options". This seems to indicate that it was not the diagram itself which caused problems - although some students described it as "complex" or "complicated", and one found the "symbols and signs confusing" - so much as the relationship of the diagram to the radio play. It was not apparent, from the notes, that the factors determining the "options" listed in the diagram would be outlined in the play. Consequently, students could not - at least on first hearing - listen to the programme with these options in mind. As a result, many failed to understand the significance of some of the points made during the broadcast: for example, that the "first" and "final" stages referred to in the diagram (a very common point of confusion) were in fact the "phases" of the proposed building programme referred to in the play.

Most students, then, had difficulty in relating Diagram 2 to the content of the radio programme. Confirmation of this comes from two other questions we asked. Firstly, although over three-quarters of those who studied the broadcast notes found them useful, only about a third recognised them as a vital link between text and programme, providing "data of the networking mentioned ... an essential feature of the programme." The largest group - more than half - valued the notes for the biographical details of characters: these were found particularly useful by students who had difficulty in identifying or distinguishing between speakers: "without visual aid, notes about the characters involved in a play are essential". Another small group - about a sixth - simply appreciated the outline of what to expect: "Radio programmes are always difficult to listen to as so much is packed in. It is a big advantage to have prior knowledge of what the programme is about." For most students, then, the notes were valued as a source of background information, rather than as a source of data.

-22A-

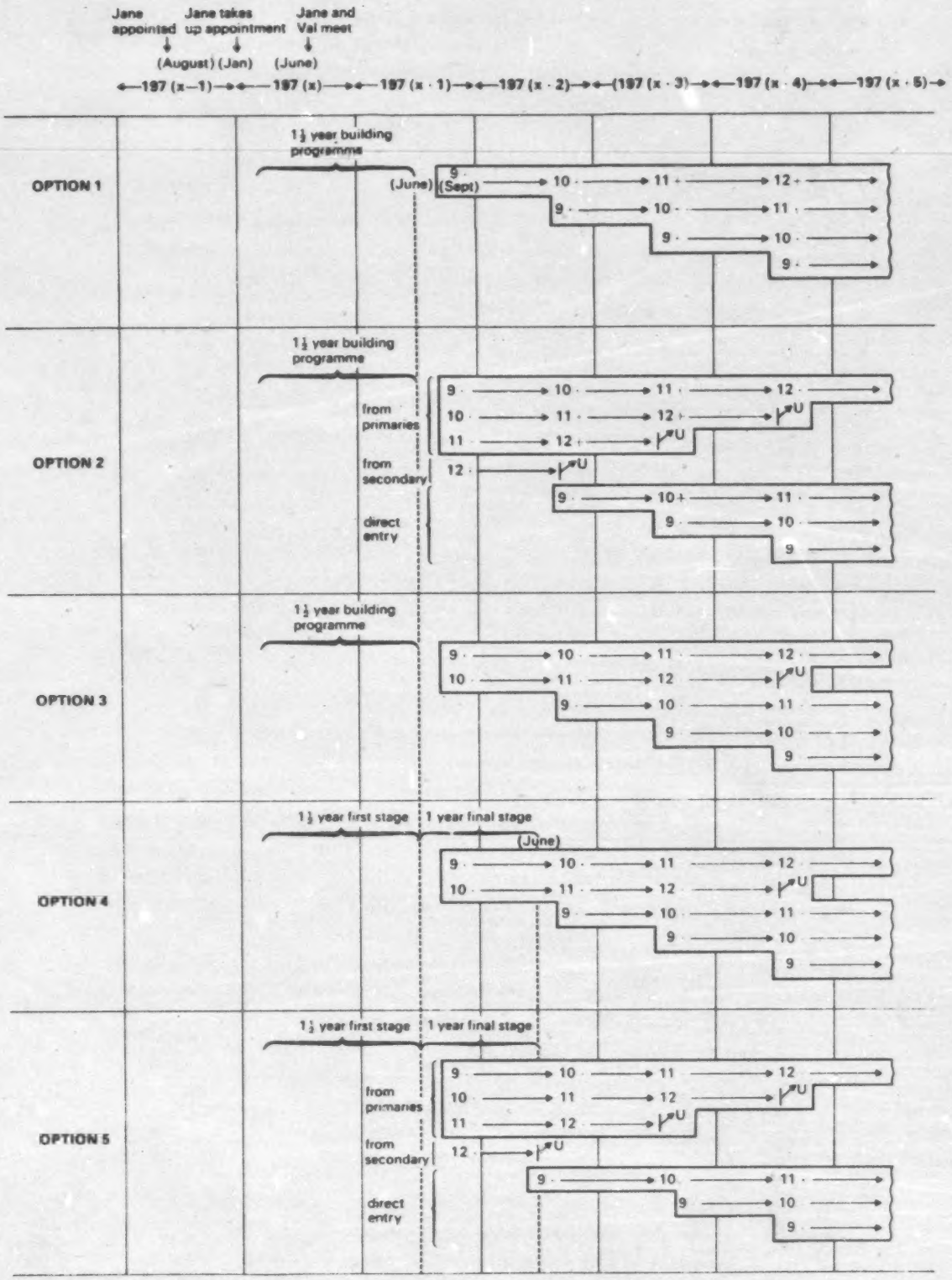


Diagram 2 (or 'What Jane took out of her handbag')

Secondly, although almost all listeners did study Diagram 2, only about a third attempted the related self-assessment question which asked students to rank the various options presented in the diagram. Not many more listeners attempted the other SAQ in the broadcast notes, so it could be suggested that avoidance of the "ranking" question was simply part of the common practice of avoiding SAQs, rather than evidence of lack of understanding. However, our questionnaire asked all listeners to list the financial and educational implications of each of the five options: only two-fifths attempted this. On the other hand, four-fifths answered another of our "test-type" questions which asked students to comment on a statement about the programme made in the broadcast notes. We feel confident, therefore, that it was lack of knowledge, rather than lack of time or interest, which made students reluctant to answer the "option" questions.

Even of those students who did answer these questions, many revealed some confusion over the meaning and implications of some of the options. Answers to the "implications" question were graded, by the evaluator, using a model answer provided by one of the unit authors. This grading found just over half the respondents to the question with a thorough understanding of each of the options: all but two of these students had heard the programme more than once. Others were unable to list more than a very few points in relation to all options together, while many had simply not grasped the significance of the two-stage building programme - an important "decision factor" raised in the play. We find, therefore, that only about a fifth of listeners expressed a sufficiently full understanding of the programme and its relationship to the printed material for the programme to have completely achieved its objectives in their case.

Returning to our earlier question of the advantage which those who had read the unit might have over those who had not, there is some evidence to suggest that this was, in fact, the case. Very few - only five - who had not read the unit attempted the "option" questions. While those who did answer revealed as full an understanding as those who had read the unit, it seems likely that the argument above, attributing non-response to lack of information, must hold good in the case of these students. There is, of course, the argument that students who were working to schedule were probably more able, and were therefore the "sort" of students who would, in any case (whether they had read the Unit 15 text or not), have listened closely to the programme and understood its subtleties. However, not all of them did, in fact, do this, and there was no difference - in terms of examination results - between those who had, and had not read the unit. It therefore seems likely that pre-reading of the text gave students an advantage - perhaps just by provision of an appropriate frame of reference - in recognising the programme as a practical example of the potential application of management techniques in education.

We have found that only about a fifth of all listeners appeared to have understood the full scope of the programme. Reasons for this low proportion include the number of students working behind schedule at this late stage in the course, the difficulty of the associated correspondence text, confusion caused by the diagram in the broadcast notes and its relationship to the programme. However, the play could be - and was - appreciated on several different levels. As we have already shown (previous section), the majority of

students understood its general purpose - that of illustrating the more informal, human factors involved in decision planning and modelling - while others valued it simply an example of human interaction in a decision-making situation. Even if these students missed some of the nuances of the programme, it clearly provided them with an experience which they were able to relate profitably to their studies in the Decision-making course.

Wider Considerations: the Principle of Radio Drama and Use of Radio in General in the Course

We turn now to those questions which were answered not just by Radio 15 listeners, but by other sections of our total responding sample of 237 students and 28 tutors. We asked those who had heard at least one of the three plays whether, in principle, they thought that the dramatic form was appropriate to the presentation of material such as that covered in E221. We find the majority of both students and tutors convinced of the appropriateness of drama, with tutors being just slightly more opposed in principle than students.

TABLE 10. Appropriateness of Drama, in Principle

	Yes, appropriate		Yes, with qualifications		No		Don't know		No answer		Heard no plays		All respondents	
	Nos.	%	Nos.	%	Nos.	%	Nos.	%	Nos.	%	Nos.	%	Nos.	%
Students	110	46	44	19	35	15	1	*	5	2	42	18	237	100
Tutors	13		5		5		1		-		4		23	

*less than 1%

Both students and tutors appreciated the "enlivening" of the material which drama could effect, felt that it was "an attractive and informative way of giving the feel of reality", and stressed the "memorability" with which "particular issues can be highlighted."

The qualifications raised by those who were nevertheless, in principle, in favour of the use of the dramatic form centred on three main issues: dramatic "convention" in educational radio, the amount of background material provided, and the relationship of the drama to other course materials. As one student pointed out in relation to this general question: "such dramatic presentation will always be compared by the listener to the professional standards achieved on TV and national radio, and amateurism in script-writing and action will detract from the impact aimed at." In fact, it seems likely that, for some students at least, the issue of "professionalism" will be less important than that of "educational efficacy": "I myself wouldn't have thought it necessary, or even right, to apply what one might call dramatical critical standards to these plays. If you get them at that level it's a bonus. But the point is, are they pedagogic? Do they get the ideas across? For example, one can carp with a certain lack of realism ... There were other points that one could carp about ... They're peripheral, but they might have had some effect on some minds." Certainly, some minds do seem to react badly towards what they consider to be "stereotypical characterization" or "far-fetched denouement" when used to make an educational point, when it is possible that "some of the main educational points tend to be glossed over to

provide continuity of dramatic plot". A related point made here was that a "case history" or "documentary" approach might be a more appropriate way of portraying "reality", since drama was essentially "fictional".

Some students felt that the amount of background material needed to accompany plays tended to get somewhat out of hand: "so much background material needed to make only a few major points in each play" tended to make the drama "a rather time-consuming form". Here again, however, not all students were in agreement, some feeling this material allowed them "to become fully conversant with the background to the problem highlighted in the programmes."

The third issue raised, and one which tutors also tended to mention, centred on the drama as just one element in a multi-media course: the need both to establish links with other media and to point these out clearly to students. Some felt that there should be a more rigorous rationale for the drama: "the dramatic form should be more closely linked with the written material i.e. not at the level of personal beliefs and prejudice" and others that one should "'draw out' the important points either in the programme notes or at the end of the programme". A tutor believed that "some discussion is required in order to point to its lesson for weaker students".

Each of these points, however, was made by only a small number of listeners, since the majority of those who heard any of the plays expressed unqualified enthusiasm towards the principle of the use of drama. Those who were completely against the principle - about a fifth of students and a quarter of the tutors - fell roughly into three groups. Firstly there were those who felt distracted by the dramatic form: "it wraps up the subject in pleasant form but interest in the human element detracts from working out the issues involved". Secondly, there were those who simply preferred "a more concentrated, instructional programme" and for whom drama "seemed a poor way to use precious time". "I just require facts to help me understand the course work". The third group consisted of those who felt that drama lacked credibility in a course of this nature: "it does not seem (to me) to be capable of appearing sufficiently credible to stimulate confidence in the material".

With regard to these particular plays (or the one/s which they had heard), again the majority of both students and tutors thought that these had made a worthwhile contribution to the course material.

TABLE 11. Contribution of the Particular Playlets

	Yes, worthwhile		Yes, with qualifications		Limited only		Progs. varied		Little/no contribution		Don't know		No answer		Heard no plays		All respondents	
	Nos.	%	Nos.	%	Nos.	%	Nos.	%	Nos.	%	Nos.	%	Nos.	%	Nos.	%	Nos.	%
Students	103	43	13	5	10	4	9	4	48	20	3	1	9	4	42	18	237	100
Tutors	12		5		1		1		5		-		-		4		28	

The plays were felt to be "useful in that they provided practical and relevant examples of concepts and situations discussed during the course"; they allowed "the student to identify with the situation in a much more realistic fashion" and "gave an interesting insight into the processes of decision-making at different levels and of the factors influencing decisions". Several students made the point that "variety of presentations is stimulating" and that, with the plays, "the novelty alone was worthwhile", while others found them "easier to concentrate on than many radio programmes" or "more memorable": "I find it easier to remember the contents of a play than to digest points made in the units (E.g. Unit 15)."

A small number of students (9) felt unable to comment globally on the plays, pointing out that some were better than others. As one might expect, there was a great deal of individual variation here, with some judging as "best" the programme which others regarded as "worst". Moreover, we are dealing with a very small number of students. However, since the main body of the report concentrates on reactions to Radio 15, we feel it is worth noting that, in the opinion of these students, the last playlet was the least successful of the three. One tutor agreed with this and suggested that "perhaps Radio 15 was simply dealing with a difficult topic not suitable for dramatic presentation."

Those who felt that the plays had made little or no worthwhile contribution (about a fifth of both students and tutors) fell into two main groups. Firstly, there were those who criticised the programmes directly, finding them "artificial" or "contrived" or "too simplified". These listeners were apparently irritated by the format, finding the plays "puerile and false" or confused by it: "I was too busy trying to remember who was who." This problem of character identification was quite common, even among students who enjoyed the plays, as the following extract from the telephone discussion illustrates:

Student A: "With these particular plays, I did have some difficulty in sorting out the first two rural governors, which, if I could have seen them as different persons on television, I wouldn't have done; and also I had difficulty in sorting out Thorpe and Ridgeway, and Butterworth [sic]. You know, they all seemed to me to look the same, in my imagination."

Evaluator: "How about other people? Did anyone else have that sort of difficulty?"

Student B: "Oh yes."

Student C: "Well yes, we all did."

Student D: "We all did."

Student E: "Yes."

Student A: "Yes. And I didn't have difficulty in visualising Lady Fennel or Jane Morland or Mrs. Blissett, but I did have difficulty with those other people. I didn't have any difficulty at all with Sir George Fosse."

Student B: "Could it be that the other people were occupying specialist roles with which you were not familiar? And if you had seen these people it would have helped?"

The student who speaks last suggests that it is important for listeners to be able to apply their own knowledge and, perhaps, impose their own stereotypes on the characters. When it is likely that students will be relatively unfamiliar with the incumbents of particular roles, these characters are likely to provide special identification problems in a radio play and may need particularly careful treatment.

As well as those who made direct and specific criticisms of the plays, there were those students (at least half of all those who reacted negatively) who simply preferred a more direct and factual type of programme: "I think the time could have been better spent in instructional detail"; "I personally find the direct lecturing technique a far greater help in clarifying course material; "a talk by an academic or educational practitioner would have been more fruitful." And of course there were those who felt they were "no more worthwhile than the few pages of text which could have replaced them."

These students were, however, a small minority, and although the plays were felt by some to have a number of shortcomings, the great majority of listeners received the plays enthusiastically: as one student said: "Don't dither about - this is a good additional approach to learning about decision-making. Let's have more like them."

There was fairly general agreement that radio programmes in the course as a whole had been of value.

TABLE 12. General Value of Radio in the Course

	Great value		Some value		Not much value		No value		Not heard enough to comment		No answer		All respondents	
	Nos.	%	Nos.	%	Nos.	%	Nos.	%	Nos.	%	Nos.	%	Nos.	%
Students	32	13	124	52	28	12	2	1	50	21	1	*	237	100
Tutors	7		17		-		-		2		2		28	

*less than 1%.

Not surprisingly, those who placed most value on the programmes tended to have heard most broadcasts. In the main, listeners appreciated the "breadth" which the programmes had given to the course, presenting the "broader context" or "social framework" of decision-making and, through interviews and discussions, introducing the "participants and resources" of the decision-making process: "The views of real individuals involved in educational decision-making gives a sense of proportion to the printed material points." This introduction of "real-life perspectives" was found stimulating, by many students: "they have lent reality to 'text book' studies. Many differing views were expressed which one could evaluate against points made in the units"; and was essential to a few: "because of difficult content of units, helped to 'steer' course along. Prevented my giving up the course! (by relating the units to real life situations)."

While some felt that the programmes "lacked depth", more spoke of the amount packed into radio programmes and of the difficulties firstly, of concentrating at all: "I have some difficulty in focussing attention sharply on an isolated

broadcast at the times scheduled" and secondly, of absorbing everything on just one hearing: "The OU broadcast is much too fluent. It is not really possible to make notes and to listen at the same time - both are required by the OU"; "would like to have opportunity of more repeats to help reinforce first hearing." A further limitation was felt to be the problem of falling behind schedule: "I found I didn't take in a lot because I seemed to be behind schedule in the units most of the year. The obvious answer of course was to tape them but this was not possible for me."

As far as subject-matter was concerned, about a fifth of the students said that they felt that "some programmes tended to go off on a tangent to the actual content of the course" or that they were of limited value, because "usually marginal, tend to illustrate side issues and give examples rather than to focus directly on major developments and central themes."

An interesting picture emerges from the comments regarding the general value of discussion programmes and of the balance between discussion and drama in the course as a whole. About a quarter of all students made specific reference to the value of discussion programmes: there was an almost equal division of opinion between those who thought that the "discussion and opinion-giving programmes were invaluable" (for the sort of reasons already mentioned) and those who found them of no value, because "boring", "woolly" or presenting material which was "repeated in the units." A small number of students (10) chose to contrast directly the value of discussion with that of drama. Again, they were equally divided, some finding "'Discussion' type programmes of most value. 'Sound effects' and dramatization have little to offer"; while others found the discussions "stilted and rehearsed" and "difficult to assimilate" though "the playlets aroused far more interest." As we have already suggested,[10] there appear to be small groups of students antipathetic to particular teaching and presentation styles. The 'discussion' and the 'dramatic' forms of presentation lying at almost opposing ends of a teaching continuum which we might label 'directive - non-directive', it is not surprising that <u>some</u> students sympathetic to one method will be irritated by the other. However, our data shows that the majority of students enjoyed both discussion <u>and</u> drama, feeling that each had a role to play in the provision of "variety".

<u>Conclusions and Recommendations</u>

<u>Radio 15 "Caught in the Net"</u>

As the last of three plays dealing with the concerns and relationships of a group of characters in a fictional rural community, Radio 15 suffered something of the fate suggested by its title, in that students had already formed attitudes to, and expectations of the E221 plays through their experience of the first two in the series. A problem arose because this third play not only, as the two previous plays had done, illustrated operative factors in a particular decision-making situation, but also provided, via the programme content, <u>data</u> which students were expected to use in combination with other, printed, data in the analysis of a simple decision "model". This additional facet of the programme was reflected in a slight shift of approach - in production terms. While the first two plays had concentrated on 'plot' development, Radio 15 turned to a concentration on 'character' exploration. These points

10. See p. 17. Also GALLAGHER, M. (1975). <u>Broadcast Evaluation Report, No: 2: E221: "Cumbria Case Study"</u>.

went largely unheeded by most students, who understood the programme as simply fulfilling a roughly similar function to that of the two earlier plays. The problem was exacerbated by the lack of explanation given in the broadcast notes as to the nature of the linkage between the 'model' (i.e. Diagram 2) and the content of the programme. In view of the difficulty experienced by students in understanding Diagram 2, it seems reasonable to suppose that more guidance is needed here. Indeed, it is probably unreasonable, at least without further explanation, to advise students to study what is, at first glance, a fairly complex diagram before listening, when in fact it can only begin to make sense during or after the programme. This was pointed out by several students who were fortunate to be able to hear the programme again when they had realized the significance of the diagram and the relationship of the programme content to it. Only one third of all listeners did, however, listen to the programme more than once.

Further problems for Radio 15 were caused by its timing and by the difficulty of the associated unit text. As the penultimate programme of the course, the third play had not only lost a large proportion of its potential audience - only a third of respondents listened - but was listened to by students the majority of whom were working well behind schedule. Consequently, only about two-fifths had read the Unit 15 text, on planning and decision models, when they heard the programme. Moreover, the text dealt with material which was completely new to most students and which they had difficulty in mastering. This meant that the assumption behind the play - that listeners would already have a grasp of the fundamentals of decision-modelling - was ill-founded, and that at least one of its specific purposes - to act as a vehicle for the analysis of a particular, simple decision model - had no chance of being achieved in the case of most students.

On the other hand understanding of, or even acquaintance with, the written text was not a pre-requisite for appreciation of other aspects of Radio 15. Most students - including many who had not read the text prior to listening - recognised it as illustrating some of the human factors involved in decision-modelling and planning and as an examination of the relationships of people to these techniques. Others saw it simply as an example of human interaction in decision-making. Most students enjoyed the programme and many had, by the end of the trilogy, become involved in the Wealdshire situation and attached to its inhabitants. On the whole, the play was applauded as a refreshing and entertaining learning medium and one which provided a highly memorable experience relevant to the overall aims and themes of the Decision-Making course.

Finally, the association of a radio play with the difficult and, to some students, rather forbidding material on model construction was an imaginative and adventurous attempt to lend the unit material situational 'reality' and make it somewhat more assimilable to students. Unfortunately, the attempt was less than wholly successful for the reasons already indicated. Some of the problems outlined above are almost certainly unalterable during the present life of the course: for instance, it would probably be almost impossible to effect a re-ordering of the unit material so that Unit 15 came earlier in the course, when students, as one tutor put it "would have more intellectual energy to deal with it". Nor is it likely, appropriate as it might seem to some students and tutors, that a new

television programme could be made dealing with model construction. However, a number of steps could be taken to ensure that student difficulties are kept to a minimum.

1. Supplementary help of some kind is needed to make the content of Unit 15 more accessible to students. Extra written material is probably not the answer, since most students in our study already felt overwhelmed by the amount of reading required in the course. A tutorial or Saturday school would be more appropriate and, given the time of year at which students come to this unit, if combined with a pre-examination revision exercise would probably be well-attended.

2. The course team might consider making an extra radio programme, of a tutorial nature, on modelling. Providing resources are available for its production, this could be mailed to students with the normal print material as a floppy disc (almost 90% of our students have access to record-players).

3. Changes should be made to the broadcast notes for Radio 15.

   (a) The time-scale heading to Diagram 2 should be revised so that it quite clearly refers to time i.e. "years".

   (b) The relationship of both diagrams to the programme should be clearly explained in a revision of Section 1 of the notes.

   (c) The advice to students that they should "study" the diagrams before listening (Section 4) will make more sense if the, at present, rather enigmatic statement that the diagrams are "essential if the programme is to achieve its objectives" is expanded (preferably in the revised Section 1). Students should know before listening in just what way the diagrams are essential, and to the achievement of which objective/s. Section 4 might, more realistically, advise students to "glance" or "have a look at" Diagram 2 before listening.

   (d) Section 5 should remind students to listen, during the programme, for the points which lead to the formulation of the five options, and for evidence of their implications. It would perhaps be worth suggesting that Diagram 2 is kept open for reference during the programme.

   (e) In Section 6 - "after listening" - students should be advised to now study Diagram 2, relating each of the options to what they have just heard in the play. They may then attempt the self-assessment question.

   (f) It should be pointed out that more than one hearing of the programme may be necessary to enable students to gain all the information needed for a complete analysis of Diagram 2.

   (g) The purpose of all this activity - i.e. the direct relationship of the play to the Unit 15 text by acting as a vehicle for the analysis of a particular decision model - should be made clear to students.

   (h) The programme's other "levels" or "purposes" - e.g. the "human factors" in modelling - should also, of course, be stressed. We have simply

concentrated, in these recommendations, on that aspect of the play which is at present given insufficient emphasis.

Radio Drama: General Issues

Use of the dramatic form for the presentation of material such as that covered in E221 can clearly be effective in providing most students with an enjoyable and memorable learning experience. Dramatization can, through the possibilities it offers for "involvement" and "identification", act as an anchor not only for key issues and concepts covered in the text but for the encapsulation of particularly complex situations and subtle relationships which would be difficult to describe and probably impossible to illustrate in print. Bearing in mind on the one hand the problems to which many students admit in concentrating on radio broadcasts, and on the other the low cost and flexibility of radio as a teaching medium, the drama is a useful way of helping to optimise use of the medium from the points of view of both the teacher - by using a low-cost resource as an attractive and stimulating means of access to complex material - and the learner - in over-coming the problems of concentration experienced with some of the more conventional uses of radio.

While the majority - four-fifths - of both students and tutors in our study were enthusiastically in favour of the principle of the use of drama in the presentation of educational material, others remained in opposition to the idea, and a number of problems were encountered in its use by some of the students who nevertheless approved of its inclusion as a teaching device. The remarks which follow are thus intended to highlight some points which might be considered by future course teams when contemplating the use of dramatization along similar lines to those adopted in E221.

There is a possibility that with material of this kind, the "entertainment" element may be so forceful as to induce some students to succumb to the temptation of regarding it simply at face value. That is, some may become so involved with the characters and engrossed in the "plot" that they completely fail to recognise the central educational purpose of the programme. A related problem is that although most students appear to find dramatization helpful as a means of focussing on particular issues or themes, some (about an eighth of those in our study) find that the drama actually distracts them from consideration of the issues involved. These students, then, do on the whole recognise the educational purpose of the programme. However, they may lose sight of it for periods while listening, and subsequently find it possible to make only a very limited analysis of what they have heard.

Clearly, students should be left in no doubt, by the preparatory written notes and indeed by the introductory remarks to the programme, as to the specifically educational purpose of the dramatization and of its particular relationship to the printed material and to the course in general. Moreover, a statement of the underlying rationale of the drama - i.e. why the course team felt that this format was appropriate to the presentation of this particular material - would probably do much to convince students of its credibility in academic terms, and of its role as something other than a refreshing divertissement. However, the use of drama for the presentation of complex and subtle situations is a most sophisticated technique, and if students are to gain full benefit from it

they may well need some guidance, firstly as to the sort of skills - of analysis, synthesis or whatever - with which they will need to approach the material, and secondly with the ways in which they might go about applying such skills. One student in our study suggested that a small amount of narration might help, several others that the play itself could have been analysed in another programme. It would be worth considering something along these lines, particularly if, as in E221, a series of plays is planned for a course: the first could perhaps be a short dramatization of a relatively simple situation, followed by its analysis and then, perhaps with the introduction of one new "point to listen for", a replay of the dramatization for a second,unaided,analysis. In this way, both the complexity of the dramatised situations and the withdrawal of direct help to students could be built up over the course.

A further problem may be caused by difficulty in identification of particular characters in the radio drama and in allocation of "viewpoints" or "roles" to these character-voices. Many students in our study - about a quarter - mentioned this problem, and it is likely that a large number of those who made no direct reference to it nevertheless experienced some difficulty: for instance, five of the six telephone discussants reported difficulty when directly questioned on this point. It seems possible that when students are relatively unfamiliar with the roles of particular characters, these may provide the greatest problems of identification, since listeners will be unable to draw on their own knowledge and experience in "filling out" any details given in the notes. Careful attention will thus need to be given to the characterization of such less familiar roles, so that they are sufficiently distinctive and strongly-drawn as to quickly allow the student to match the voice to the information given in the notes. It may be worth considering the inclusion of an "artist's impression" of each of the characters in the broadcast notes, if these are to be the main source of written identification, since this would help those students who are poor "visualizers" and would provide a quick identification check for those who wanted to refer to the notes during the broadcast. It appeared from our study that some students were spending time - consequently losing verbal information - during the programmes in flicking through the notes trying to re-read the biographical details in an attempt to identify characters.

On the other hand, a careful check should be kept on the amount of background information supplied to students in the supplementary material. The course team may well hope to support their enthusiastically abundant provision of biographies, maps, letters, cuttings, archive documents, etc., with the argument that students don't need to work through all of it - that it exists as a resource on which listeners with varying degrees of interest can make varying demands. However, there is evidence that some students - often those struggling with the course materials - simply do not have the confidence to make a selection, and that these students may become overwhelmed and confused by the sheer volume of such material. Though they may well try to work through all the supplementary help provided, they are more likely to become discouraged to the extent of discarding all of it, consequently approaching the programme without adequate preparation. A common criticism, from those who

---

11. See GALLAGHER, M. (1975). Broadcast Evaluation Report, No: 2: E221: "Cumbria Case Study".

reacted unfavourably to the E221 plays, was that they were "time-consuming"; the criticism referred not just to the programmes themselves but to the associated background material. In fact the amount of back-up provided was not immense - about eleven pages for all three plays - but the comments probably indicate a certain sense of dissatisfaction with the "return" obtained for time invested. Material provided in this way should be directly relevant to an understanding or appreciation of the educational intentions of the programme; it should not be used simply as a means of adding interest to the drama per se.

Students should be encouraged to judge radio drama of the type covered in our study primarily in terms of its educational effectiveness rather than as exemplifying aspects of dramatic convention. Indeed, it should be made quite clear to listeners that the dramatic genre has simply been chosen as an appropriate vehicle for the furtherance of a particular educational purpose. Naturally, however, the effectiveness of any piece of teaching will depend to some extent on its manner of presentation: to this extent the genre is important in an educational sense. Where the chosen genre is that of drama, at least two sorts of problem may arise. Firstly, on the part of teachers/programme-makers, there may occasionally be the temptation to sacrifice an educational point in the interests of character or plot: in other words to use the genre not as a vehicle but to treat it as an end in itself. Clearly, the relationship between form and content must be held sharply in perspective in the presentation of any educational material: when using a powerful and evocative form such as drama for its presentation this relationship may be particularly open to ill-definition by both teachers and learners. Secondly, on the part of learners/listeners, the "transplantation" of drama from an accepted entertainment setting to a novel role in the educational field may well cause it to be assessed according to predominantly entertainment rather than educational criteria. A further problem may be caused in that some listeners, unfamiliar with the conventions of radio drama, may attempt to apply critical standards learnt in viewing drama on television, where other, very different conventions exist. As already suggested, listeners may to some extent be "educated" into the use of this type of material: nevertheless, the maintenance of a certain professional standard - perhaps through the operation of similar "precautions" to those taken with the E221 plays - is essential if students are not to be actually distracted from the educational purpose by particular dramatical errors.

Finally, one particular problem will probably always exist, since it seems that a smallish proportion of students (about a fifth of those in our study) will simply remain fundamentally opposed to the use of dramatisation, however polished and whatever the context. This opposition is generally expressed in terms of a preference for a more directly instructional type of presentation. However, as the study has suggested, this attitude represents just one group of students entrenched at one end of a continuum which might be labelled "directive - non-directive teaching". At the other extreme we have found a group of roughly similar size just as firmly opposed to the straightforward lecture/discussion-type programmes. In fact, most students appear to be nearer the middle, valuing both types of teaching as being appropriate to rather different types of subject-matter, and welcoming the "variety" which the provision of both (along with other uses) affords. Indeed, the identification of these different groups confirms the need for variety - not just between, but within media - in our teaching system. For

just as we have tended to acknowledge-in our provision of a range of media - that certain students are visual learners, while others, for instance, may learn more efficiently from words, so we should recognise that these differences, which exist at the fundamental level of "learning style", must consequently apply equally to the "teaching style" adopted across a range of formats within any particular medium. In providing a range of styles and formats we thus maximise the opportunities for our wide range of students to meet fruitful learning situations both across and within the various media offered.

THE OPEN UNIVERSITY

INSTITUTE OF EDUCATIONAL TECHNOLOGY

AUDIO-VISUAL MEDIA RESEARCH GROUP

Tony Bates, Senior Lecturer in Media Research Methods.

Margaret Gallagher, Research Officer.

Carrie Roberts, Research Assistant.

John Meed, Research Consultant.

Oonagh Waugh, Research Consultant.*

Susan Cox, Secretary.

Vera Lynham, Research Clerk.*

*Part-time